CLAIMS

Sub a1

1. A button mechanism, comprising:

a switch means for operating a button circuit in response to actuation of the button mechanism;

display means disposed in correspondence with the switch means and comprising:

a driver layer having a conductor pattern configured in the pattern of a symbol to be displayed on the button mechanism;

a transparent conductor layer; and

an electrically active ink layer disposed between the transparent conductor layer and the driver layer.

2. A button mechanism as defined in claim 1, wherein the conductor pattern comprises:

a first set of conductor elements corresponding to a first symbol; and

a second set of conductor elements corresponding to a second symbol;

wherein the first and second symbols are coincidentally located.

3. A button mechanism as defined in claim 2, further comprising a third set of conductor elements which form segments common to both the first and second symbols.

4. A button mechanism as defined in claim 2, wherein the first and second symbols are not commonly oriented.

5. A button mechanism as defined in claim 1, wherein the switch means comprises a popple switch.

6. A button mechanism as defined by claim 5, further comprising a transparent actuating member disposed in correspondence with the popple switch, such that the display means is between the popple switch and the transparent actuating member.

7. A button mechanism as defined in claim 6, wherein the transparent actuating member has a convex outer surface.

8. An adaptable keypad, comprising:

a plurality of keys, each of the plurality of keys comprising:

a switch means for operating a button circuit in response to actuation of the button mechanism;

display means disposed in correspondence with the switch means and comprising:

a driver layer having a conductor pattern configured in the pattern of a symbol to be displayed on the button mechanism;

a transparent conductor layer; and

an electrically active ink layer disposed between the transparent conductor layer and the driver layer.

9. An adaptable keypad as defined in claim 8, wherein the conductor pattern of each key comprises:

a first set of conductor elements corresponding to a first symbol; and

a second set of conductor elements corresponding to a second symbol;

wherein the first and second symbols are coincidentally located.

10. An adaptable keypad as defined in claim 9, each key further comprising a third set of conductor elements which form segments common to both the first and second symbols.

11. An adaptable keypad as defined in claim 9, wherein the first and second symbols are not commonly oriented.

12. An adaptable keypad as defined in claim 9, wherein the first set of conductor elements for each of the plurality of keys forms a first symbol set, the second set of conductor elements for each of the plurality of keys forms a second symbol set, the first and second symbol sets are exclusively energized depending on a mode of operating the keypad.

13. An adaptable keypad as defined in claim 8, wherein each of the switch means comprises a popple switch.

14. An adaptable keypad as defined by claim 13, further comprising a plurality of transparent actuating members, each of the transparent actuating members disposed in correspondence with each of the popple switches, such that the display means is between the popple switches and the transparent actuating members.

15. An adaptable keypad as defined in claim 13, wherein each of the transparent actuating members has a convex outer surface.

16. A portable electronic device having an adaptable keypad, the portable electronic device operable in a plurality of modes, the portable electronic device comprising:

a keypad having a plurality of keys comprising:

a switch means for operating a button circuit in response to actuation of the button mechanism;

display means disposed in correspondence with the switch means and comprising:

a driver layer having a conductor pattern configured in the pattern of a symbol to be displayed on the button mechanism, the conductor pattern including a first set of conductor elements corresponding to a first symbol, and a second set of conductor elements corresponding to a second symbol, and wherein the first and second symbols are coincidentally located;

a transparent conductor layer; and

an electrically active ink layer disposed between the transparent conductor layer and the driver layer.